

ABSTRACT OF THE DISCLOSURE

An interbody fusion device in one embodiment includes a tapered body defining a hollow interior for receiving bone graft or bone substitute material. The body defines exterior threads which are interrupted over portions of the outer surface of the device. The fusion device defines truncated side walls so that on end view the body takes on a cylindrical form. The side walls are provided with vascularization openings, and the body wall device includes opposite bone ingrowth slots extending through the interrupted thread portion of the body. In another embodiment, the tapered body is solid and formed of a porous biocompatible material having sufficient structural integrity to maintain the intradiscal space and normal curvature. The material is preferably a porous tantalum having fully interconnected pores to facilitate complete bone tissue ingrowth into the implant. An implant driver is provided which engages the truncated side walls to complete the cylindrical form of the implant at the root diameter of the interrupted threads, to thereby facilitate threaded insertion of the implant to the intra-discal space between adjacent vertebrae. Methods for posterior and anterior insertion of the fusion device are also disclosed.